LIFSHITS, I. D.; KOPYL, A. N.; ALYAUTDINOV, A. O.; SHUVALOVA, L. S.;
KOMAROVA, Z. V.

Footwear made with polymer materials. Kozh. obuv. prom. 4 no.10:17-19 O '62. (MIRA 15:10)

(Boots and shoes) (Plastics)

KHOROSHAYA, Ye.S.; KOVRIGINA, G.I.; KOSTRYUKOVA, L.I.; MUSATOVA, M.D.;
KOPYL, A.N.; Prinimala uchastiye: KRASNER, Ye.Ya.

Rapid method for determining rubber content of shoe cardboard made from leather fibers bonded with latex. Kozh.-obuv. prom. 5 no.6:31-32 Je '63. (MIRA 16:6)

(Rubber, Artificial--Analysis)

L 22130-65 EEC(b)-2/EEC(k)-2/EWA(h)/EWG(k)/EWT(l)/T/ Pn-4/Pz-6/Peb IJP(c)
ACCESSION NR: AP5001748 S/0302/64/000/004/0066/0068

AUTHOR: Yanovich, V. S.; Kopyl, G. F. B

TITLE: Photorelay for indicating variable luminous fluxes in the presence of a constant radiation 5

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1964, 66-68

TOPIC TAGS: photorelay, flame detection, flame indication

ABSTRACT: A special photorelay has been developed for monitoring the flame in a combustion chamber with very hot walls (gas turbine, 700C; Cowper's stove, 1,000C). The relay responds to a variable component of the flame which is playing at a frequency of a few cps to hundreds of cps. A Soviet FTG-2 phototransistor is used as a sensing element in the relay. Two electronic amplifier circuits — with tubes and with transistors — are presented. Both photorelay types exhibited stable operation within -15+55C. The electron-tube photorelay

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ACCESSION NR: AP5001748

2

was tested in the combustor of a GTU-50-800 gas turbine at the Khar'kov Turbine Plant and in blast stoves at the Dneprodzerzhinsk Metallurgical Plant; the transistor-type photorelay was tested at the boiler department of the Kiev TETs-3 power station. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: IE NO REF SOV: 000 OTHER: 000

Card 2/2

KOPYL, I.F.

L.M. Krechetovich; obituary. Bot.zhur. 42 no.6:954-956 Je '57.
(MIRA 10:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Krechetovich, Lev Melkhisedekovich, 1878-1956)

KOPYL, I.F., professor, doktor sel'skokhozyaystvennykh nauk.

Sergei Nikolaevich Vinogradskii, 1856-1953. Nauka i pered. op. v sel'khoz. 6 no.11:52 N '56. (MLRA 10:1)

1. Moskovskiy universitet.
(Vinogradskii, Sergei Nikolaevich, 1856-1953)

KOPYL, I.F.; TYUTYUNNIKOV, A.I.; VARAKIN, I.V.

Effect of different techniques used in cultivating heavy loam soils on their physiochemical properties and the harvest of crops. Trudy MIMESKH 4 no.2:78-87 '59. (MIRA 15:4)
(Tillage)

KOPYL, I. YE.

Karakul Sheep

Work practices of the Karakul State Farm "Udarnik", Kar. i zver., 5, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED

DOVZHANSKIY, S. I.; PUSHKARCHUK; pri uchastii: VORONTSOVOY, G. A., vrach;
KOPYL, P. S., vrach; ZUBOVICHA, vrach

Treatment of dermatological patients at the "Nemirov" Health
Resort. Vest. derm. i ven. no.6:74-76 '61. (MIRA 15:4)

1. Iz L'vovskogo oblastnogo dermatologicheskogo dispansera
(glavnyy vrach T. G. Kovalishina) i kurorta "Nemirov" (glavnyy
vrach A. D. Yusvenko)

(SKIN--DISEASES)
(LVOV PROVINCE--HEALTH RESORTS, WATERING PLACES, ETC.)

KOPYLENKO, B.I., inzh.

Grabbing devices used for loading bricks in the Chinese People's Republic. Stroi. prom. 36 no.2:42-43 F '58. (MIRA 11:2)
(China--Loading and unloading)
(China--Hoisting machinery)

KOPYLENKO, V.A., inzh.

Use of electronic digital computers for calculating the spans of medium and long bridges over permanent water courses taking the processes occurring in the river bed into account. Trudy MIIT no.181:129-143 '64. (MIRA 18:1)

KOPYLENKO, V.P.; VALISHVILI, G.I.

Rigidity calculation of caliper gauges with holes. Stan. i instr. 36 no.11:31-32 N '65. (MIRA 18:11)

GLUSHKOV, G.S.; SINDEYEV, V.A.[deceased]; BEZUKHOV, N.I., doktor tekhn. nauk, prof., zasl. deyatel' nauki i tekhniki RSFSR, retsenzent; KOPYLENKO, V.P., prof., nauchn. red.; FUFAYEVA, G.I., red.

[Course in the strength of materials] Kurs soprotivleniia materialov. Moskva, Vysshaia shkola, 1965. 767 p. (MIRA 18:5)

RUBININ, Mikhail Vladimirovich; KOPYLENKO, V.P., kand. tekhn. nauk, dots., retsenzent; SAVEL'YEV, N.G., kand. tekhn. nauk, dots., retsenzent; GRIGOLYUK, E.I., dots., retsenzent; YANUSHEVICH, Ye.S., kand. tekhn. nauk, dots., red.; SAVEL'YEV, Ye.Ya., red. izd-va; CHERNOVA, Z.I., tekhn. red.

[Strength of materials; theory] Soprotivlenie materialov; teoriia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 467 p. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Grigolyuk).
(Strength of materials)

KOPYLENKO, S.D.

⑦

C. A. V-48
Jan 10, 1954
Fats, fatty oils
Waxes + Detergents

Experiment on refining and hydrogenation of rape oil on Kharkov Fat-Combine. A. M. Zharskii, T. M. Novikova, T. E. Romanova, S. D. Kopylenko, P. I. Kaminskaya, A. Ya. Zak, and T. I. Gladkaya. *Masloboino-Zhirovaya Prom.* 18, No. 7, 16-7(1953).—The oil was washed with H_2SO_4 (d. 1.82), neutralized with 30-40% lye, boiled with 1-1.95% soln. NaCl, and settled 8-10 hrs. The fat is bleached at 160-170° with active C and fuller's earth (0.7-1 and 3-3.3 kg./ton, resp.) and in an atm. of H. Hydrogenation is with Ni formate catalyst and at 215-230° to a m.p. of 32-6° (4-6 hrs.).

Vladimir N. Krukovsky

KOPYLENKO, S. D.

USSR

The manufacture of edible hydrogenated fat by using a continuous process at Kharkov fat combine. A. M. Zharskii, T. M. Novikova, G. I. Teslenko, and S. D. Kopylenko (Kharkov Fat Combine). *Masloboino-Zhirovaya Prom.* 19, No. 7, 13-20(1954).—The process and the quality and characteristics of the hydrogenated fat produced are discussed.

Vladimir N. Krukovsky

KOPYLENKO, S.D., inzh.

Purification of recovered solutions. Masl.-zhir. prom. 24 no. 8:44
'58. (MIRA 11:8)

1. Khar'kovskiy zhirovoy kombinat.
(Oil industries--Equipment and supplies)

KOPYLENKO, V.I.

ZHAN FU-LEN [Jang Fu-leng]; LI SU-CHI [Li Hsi-sh'ih]; ~~KOPYLENKO, V.I.~~

Using precast reinforced concrete slabs for laying temporary automobile roads at construction sites. Stroi.prom. 35 no.4:47-48 Ap '57. (MLRA 10:3)
(Roads, Concrete) (Concrete slabs)

MIROLYUBOV, N.N., doktor med.nauk; KOPYLENKO, Ye.A. (Irkutsk)

Some characteristics of the treatment of thyrotoxicosis with radioactive iodine in a focus of endemic goiter. Klin.med. 39 no.3:108-114 Mr '61. (MIRA 14:3)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (zav. - doktor med.nauk N.M. Mirolyubov) Irkutskogo meditsinskogo instituta (dir. - prof. A.I. Nikitin).

(HYPERTHYROIDISM) (IODINE—ISOTOPES)

KOPYLETS, I.

KOPYLETS, I. "On the Control of Tomato Big Bud." Sad i Ogorod, no. 5, 1949, p.75.
80 Sal3

SO: Sire Si-90-53 15 Dec. 1953

KOPYLEV, A A

DULMAN, T.M. and KOPLYEV, A.A.

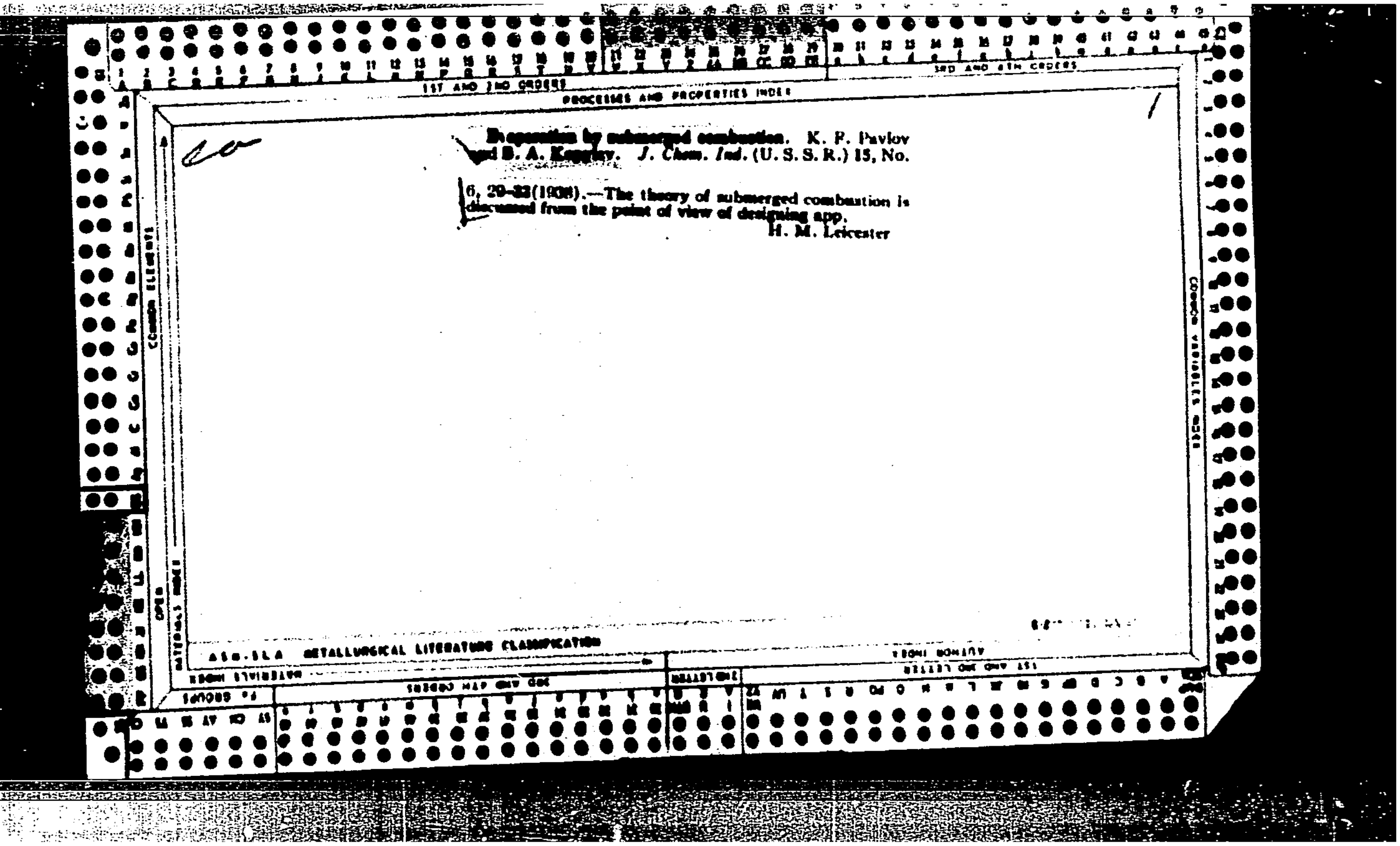
Mutual relations between pectinodecomposing and denitrificising bacteria.

Mikrobiologiya. Vol. 21. P. 677, 1952.

KOPYLEV, B. A. , MEL'NIK, B. D., LESOKHIN, I. G., and TRABER, D. G.

"The kinetics of Burning Raw Materials in Sulfuric Acid Production," J. Chem. Ind., (U SSR) 15, No. 2, 16-21 (1938).

At all temps. the amt of S burned in FeS2 powder decreases with time, due to formation of an oxide film over the particles. Hence the FeS2 should be finely ground. At 500°, slow oxidation of the S occurs, but at 1100° actual burning takes place and is much more complete. Equations are derived for calcg. the rate of burning of FeS2 at various temps.


1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION
1ST AND 2ND LETTER
AUTHOR INDEX
MATERIALS INDEX
3RD AND 4TH ORDERS
OPEN
COMMON ELEMENTS
COMMON VARIABLES INDEX

/

Evaporation by submerged combustion. K. F. Pavlov and B. A. Kaganov. *J. Chem. Ind.* (U. S. S. R.) 15, No. 6, 29-33(1938).—The theory of submerged combustion is discussed from the point of view of designing app.

H. M. Leicester

1ST AND 2ND ORDERS

3RD AND 4TH GROUPS

PROCESSES AND PROPERTIES INDEX

CA

1

Transfer of heat from gas to liquid during agitation. B. A. Kopylov. *Trudy Leningrad. Khim.-Tekhnolog. Inst.* 1959, No. 7, 245-55; *Khim. Referat. Zhur.* 1959, No. 8, 133; cf. *C. A.* 52, 8841e.—In evapn. by submerged combustion, the heat flow from gas to liquid depends on the heat resistance caused by the presence of boundary layers of gas, steam and liquid. For bubbles 1, 2, 5 and 100 mm. in diam., the thicknesses of the film in percentage of the radius are calcd. to be 70, 24, 6.2 and 2.5. The coeff. of heat transfer (α) is 160, 236, 358 and 540 cal./sq. m./degree C./hr. for bubbles of these diams. In spite of the increase of α with an increase of diam. of the bubbles the total heat transfer is less than with small bubbles because the surface of the heat transfer must also be considered in the calcns. The calcd. time required for the establishment of the heat equil. between the gas and liquid for bubbles 2 mm. in diam. is 0.00805 sec.; the exptl. value is 0.00375 sec.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

1ST AND 2ND LETTERS

KOPYLEV, B. A., KUDRYAVTSEV, S. A., MEL'NIK, B. D., and NESOKHIN, I. G.

"Vapor pressure over a mixture of chlorosulfonic acid with sulfuric anhydride.," J. Applied Chem. (USSR) 14, 478-82 (in German, 482), 1942.

The vapor pressure of $ClSO_2H$ at 20-50° is considerably higher than that calcd. from the equation of Soborovskiy and Epshtein (Chemistry and Technology of Chemical War Materials (1938) in Russian). This is probably due to the fact that the equation does not take into account the change in heat of evapn. with temp. Curves are prepd. for the vapor pressure of $ClSO_2H$ with various contents of free SO_2 (from 0 to 40%) which were not available in the literature. The expts. also gave curves for partial pressures of SO_2 and $ClSO_2H$ over $ClSO_2H$ satd. with SO_2, and curves of the isotherms as dependent upon the concn. of the free SO_2 in $ClSO_2H$.

KOPYLEV, B. A., AVERBUKH, A. YA., LESOKHIN, I. G.

Nitrogen

Apparatus for determination of nitrogen in gaseous mixtures. Zhur. anal. khim. 7 No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

KOPYLEV, B. A.

KOPYLEV, B.A., TRABER, D.G.; SYCHEV, M.M.; GRIGOR, V.A.

[Manual of practical problems in general chemical technology] Rukovodstvo k prakticheskim zaniatiiam po obshchei khimicheskoi tekhnologii. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1953. 315 p. (MLRA 7:7)
(Chemistry, Technical)

KOPYLEV, B.A., (Leningrad); AVERBUKH, A.Ya., (Leningrad).

Glass manufacture. Khim. v shkole no.3:13-20 My-Je '53. (MLRA 6:7)
(Glass manufacture)

KOPYLEV, B. A.

AID - P-85

Subject : USSR/Chemistry

Card : 1/1

Authors : Pozin, M. Ye., and Kopylev, B. A.

Title : In memory of the Academician Dmitriy Petrovich Konovalov

Periodical : Zhur. Prikl. Khim. 27, no. 4, 353-355, 1954

Abstract : Brief outline of the scientific activities of D. P. Konovalov, founder of the Russian school of physical chemistry on the occasion of 25th anniversary of his death.

Institution : None

Submitted : No date

Apparatus for determination of solubility. I. G. Lesokhin, B. A. Kopylev, A. Ya. Averbukh, and V. P. Bogdashev. 5 -1
U.S.S.R. 110,056, Sept. 25, [illegible]

Kopylev, B. A.

AID P - 3736

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 16/16

Authors : Kaganovich, Yu. Ya. and B. A. Kopylev

Title : Gorbanev, A. I. and V. Ya. Nikolina. Sul'fat natriya. (Sodium sulfate) Goskhimizdat, 1954 (Book review)

Periodical : Zhur. prikl. khim. 28, 8, 906-908, 1955

Abstract : Critical review.

Institution : None

Submitted : No date

MIKULIN, Georgiy Iosifovich; POLYAKOV, Ippolit Konstantinovich; KOPYLEV, B.A.
redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor

[Distillation in the production of soda] Destilliatsiia v proizvodstve sody. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 347 p. (MIRA 9:11)
(Soda industry) (Distillation, Destructive)

KOPYLEV, B A

POZIN, M.Ye., professor; KOPYLEV, B.A.; TUMARKINA, Ye.S.; BEL'CHENKO, G.V.;
SIMONOV, G.A., redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor

[Practical manual on the technology of inorganic substances] Rukovodstvo k prakticheskim zaniatiiam po tekhnologii neorganicheskikh veshchestv. Pod obshchei red. M.E.Pozina. Leningrad, Gos. nauchno-tekhn.izd-vo khim.lit-ry, 1957. 291 p. (MLRA 10:7)
(Chemistry, Inorganic)

KOPYLEV, B.A.; TRABER, D.G.; SYCHEV, M.M.; GRIGOR, V.A.; REYKHSFEL'D, V.O., redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor.

[Manual for practical work in general chemical technology] Rukovodstvo k prakticheskim zaniatiiam po obshchei khimicheskoi tekhnologii. Izd.2-oe, ispr. Leningrad, Gos.nauchno-tekhn.izd-vo khim. lit-ry, 1957. 315 p. (MLRA 10:6)
(Chemistry, Technical--Study and teaching)

KOPYLEV, B.A.

USSR /Chemical Technology. Chemical Products and Their Application
Processes and Apparatus for Chemical Technology

H-2

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1536

Author : Pozin M. Ye., Kopylev B.A.

Title : Effectiveness of the Absorption of Gases of Different Solubility by the Bubbling and Foaming Methods

Orig Pub: Zh. prikl. khimii, 1957, 30, No 3, 362-369

Abstract: For a cross current there has been derived the approximate equation: $\eta = 2K / (2w + K)$, where η -- efficiency, K -- total coefficient of absorption, refered to 1 m^2 of cross section area of gaseous flow (plate), at a moving force

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Lensovet Polytech Inst

USSR /Chemical Technology. Chemical Products and Their Application
Processes and Apparatus for Chemical Technology

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1536

expressed in units of concentration of the gaseous phase, kg/m^2 hour (kg/m^3); w -- linear velocity of inert component, in m/hour, numerically equal to its rate of flow per 1 m^2 of plate surface area (Pozin M. Ye., Zh. prikl. khimii, 1952, 25, No 10, 1032). To utilize the equation it is necessary to have available an experimentally determined correlation between K and w, or η and w. Analysis of extensive experimental data of various investigators shows that the values of η, on absorption in bubbler and foaming apparatus, are determined essentially by the solubility of

Card 2/3

KOPYLEV, B. A.

[illegible]

NaHCO$_3$, from 33 to 90 kg./sq. [illegible] atm. as [illegible] increased to about 90%. I. Bencowitz

AUTHORS: Pozin, M. Ye., Kopylev, B. A. SOV/156-58-3-48/52

TITLE: The Velocity of the Interaction of Nepheline With Aqueous Solutions of Sulfur Dioxide (Skorost' vzaimodeystviya nefelina s vodnym rastvorom dvuokisi sery)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 588-591 (USSR)

ABSTRACT: When sulfur dioxide reacts with an aqueous suspension of nepheline an absorption of SO_2 in the solid phase occurs. The quantity of SO_2 absorbed is dependent on the SO_2 concentration in the solution. In concentrated solutions of SO_2 (1,9 - 4,9 SO_2) a strange chemical reaction between nepheline and SO_2 occurs. In solutions with a relatively high content of SO_2 a longer period of absorption is required before SO_2 is found in the suspension. The presence of SO_2 is explained by the decomposition of acid aluminum sulfite. $(2\ Al(HSO_3)_3 \rightleftarrows Al_2(OH)_4SO_3 + 5\ SO_2 + H_2O)$.
The absorption of SO_2 from the solution by the solid phase of nepheline is made use of in the absorption process of

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SOV/156-58-3-48/52

The Velocity of the Interaction of Nepheline With Aqueous Solutions of Sulfur Dioxide

SO_2 from gases with aqueous nepheline suspensions. There are 4 figures and 6 references, which are Soviet.

ASSOCIATION: **Kafedra** tekhnologii neorganicheskikh veshchestv Leningradskogo instituta im. Lensoveta
(Chair for the Technology of Inorganic Substances at the Leningrad Technological Institute imeni Lensovet)

SUBMITTED: January 8, 1958

Card 2/2

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Bel'chenko, G. V., Tereshchenko, L. Ya. SOV/156-58-4-47/49

TITLE: On the Rate and Mechanism of Nitric Acid Formation Under Foam Conditions (O skorosti i mekhanizme obrazovaniya azotnoy kisloty pri pennom rezhime)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 794-798 (USSR)

ABSTRACT: Experimental investigations were carried out in order to determine the influence exerted by some hydrodynamic and physico-chemical factors upon the absorption process of nitrogen oxides in the foam apparatus. The kinetics and mechanism of the process were discussed. The influence exerted by the gas rate in the apparatus upon the degree of transformation of the nitrogen oxides to HNO_3 and the absorption coefficient were investigated. With increasing gas rate from 0.25-1.5 m/sec both processes are intensified. The absorption coefficient K rises from 900-2360 m/hour. The degree of transformation of nitrogen oxides into nitric acid drops from 44 % to 24 % due to a decrease of the contact

Card 1/2

between the phases. The dependence of the degree of transformation of NO_2 to HNO_3, of the initial content of NO_2, as well as the influence of the nitric acid concentration were investigated. The absorption of nitrogen oxides at an initial concentration of about 4 % NO rises up to 40 % HNO_3 on an increase of the nitric acid concentration. The increase is due to the catalytic effect of nitric acid during the oxidation of the nitrogen oxides. There are 4 figures and 6 references, 5 of which are Soviet.

ASSOCIATION: Kafedra tekhnologii neorganicheskikh veshchestv Leningradskogo tekhnologicheskogo instituta im. Lensoveta (Chair of Technology of Inorganic Substances at the Leningrad Technological Institute imeni Lensovet)

SUBMITTED: May 10, 1958

Card 2/2

5(1, 2)

SOV/153-58-5-24/28

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Bel'chenko, G. V.

TITLE: Bromine and Iodine Desorption by Air Under Foam Conditions (Desorbtsiya broma i ioda vozdukhom pri pennom rezhime)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 142-148 (USSR)

ABSTRACT: Although the production of elementary bromine and iodine by blowing with air from the lye is more economical than other methods, the apparatus used for it is complicated and has a low capacity. The production using foam showed good results in other absorption and desorption processes (Ref 1) and therefore offers also good prospects for bromine and iodine. The method of iodine desorption by air will make possible the standardizatio of the apparatus of iodine - bromine plants, a simplified handling, and a drop of the prime cost as soon as it will be introduced to industry. There are, however, no data in the descriptions of this process (Refs 5-7) which describe the rate of the iodine desorption by air under different conditions. This was the reason for the present paper. The authors used the apparatus previously described by them (Ref 8). All its elements

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consisted of vinyl plastics, the foam apparatus was of plexiglass. Artificially produced lyes with different NaJ or NaBr amounts in an NaCl solution served as initial solutions. The iodide was oxidized to iodine by sodium nitrite solution which had earlier been brought up to pH 2.3 by sulfuric acid. The degree of desorption A, the degree of efficiency η of a bottom of the apparatus, and the desorption coefficient K were calculated from the analysis results of the liquid prior to and after passing the foam apparatus. As is known, A increases with the air volume f per one part of volume of the liquid. Table (p 144) shows the values of f used at different experimental conditions in dependence on the linear air velocity w at a liquid consumption of L = 25 liter/hour. This corresponds to the values of the intensity of the liquid current i = 0.63 m^3/m per hour, as related to the diameter of the discharge opening. The authors arrived at the following conclusions: 1) The efficiency of the foam use in the iodine and bromine blowing from a lye containing the two components proved to be high. 2) The value A amounts to 50-75% on a bottom of the foam apparatus at a w-value of from 1 to 3 m/sec. and at 35-40°, depending on the magnitude of the i-value. In a temperature increase of from 12.5 to 35-40° the A value (at i = 0.63 m^3/m per hour) increases from 43 to 75%. 3) Within the range of w 1-3 m/sec. and at the said i-value the A amounts to 65% for bromine at 15°, and to 73% at 35-40°. At i = 2.52 and 3.58 m^3/m per hour A for bromine depends upon w. The optimum specific air consumption corresponding to the maximum of A is observed at w = 2 m/sec. 4) The K-values determined in dependence upon w for iodine and bromine in that apparatus point to the fact that the rate of iodine desorption processes under the conditions given was controlled by the resistance of the liquid phase; the desorption velocity of bromine is, on the other hand, controlled by the resistance of the liquid as well as of the gaseous phase. 5) The absolute values of K of iodine and bromine desorption in the foam apparatus are several dozen times higher than in scrubber apparatus. The capacity of a unit of volume of the foam apparatus is 8 times higher than that of a scrubber with a headpiece operating according to an (extensive) film process. The following scientists took part in the experiments: A. P. Lopatina, N. A. Petrova, and V. S. Be-

Card 3/4

Bromine and Iodine Desorption by Air Under Foam Conditions SOV/153-58-5-24/28

gorad. There are 6 figures, 1 table, and 15 references, 13 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Kafedra tekhnologii neorganicheskikh veshchestv (Leningrad Technological Institute imeni Lensovet, Chair of the Technology of Inorganic Substances)

SUBMITTED: November 25, 1957

Card 4/4

KOPYLEV, B.A.

POZIN, M.Ye.; KOPYLEV, B.A.

Influence of the gas velocity on the mass transfer in bubbling and foam processes of absorption. Zhur.prikl. khim. 31 no.3:387-393 Mr '58.
(MIRA 11:4)

1.Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Gases--Absorption and adsorption)

POZIN, M.Ye.; GRIGOR'YEV, G.S.; KOPYLEV~~, B.A.;~~ SOKOLOVA, A.D.

Rate of reaction of apatite with sulfuric acid following their intermixing. Zhur. prikl. khim. v. 31 no.5:693-701 My '58. (MIRA 11:6)

1.Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Nevskiy khimicheskiy zavod.
(Sulfuric acid) (Apatite) (Chemical reaction, Rate of)

POZIN, M.Ye.; KOPYLEV, B.A.; PETROVA, N.A.

Absorption of ammonia by copper ammine solutions in the foam apparatus. Zhur. prikl. khim. 31 no.7:1007-1013 Jl '58. (MIRA 11:9)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Ammonia) (Copper compounds) (Gas purification)

5(2)

SOV/153-2-3-20/29

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Varshavskiy, V. L.

TITLE: The Flotability of Gypsum and of a Precipitate With Different Reagents

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 412-419 (USSR)

ABSTRACT: The authors investigated various enrichment reagents and regulators for the flotation of gypsum ($CaSO_4 \cdot 2H_2O$) and the precipitate ($CaHPO_4 \cdot 2H_2O$) to achieve a separation of the two substances by flotation. The investigations carried out showed the following results: in the presence of oleic acid (consumption: 750-1000 g/ton) and of IM-11 (consumption: 500-750 g/ton) the precipitate and gypsum were practically completely floated at pH 6.5-7. The flotability of the precipitate and gypsum by oleic acid decreases rapidly with the decrease of the pH value of the pulp. In the flotation with IM-11 a decrease of the pH value leads to a certain activation of the gypsum flotation and to a considerable reduction of the flotation of the precipitate. These effects of the pH value are shown by figure 2.

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SOV/153-2-3-20/29

The Flotability of Gypsum and of a Precipitate With Different Reagents

The anion reagent aeroflot-25 proved to be the most efficient among the flotation reagents investigated. In the presence of aeroflot-25 the precipitate is strongly floated whereas gypsum is hardly floated at all. The flotation of a precipitate-gypsum mixture differs from the flotation of the individual components since in the common presence of gypsum and precipitate in the liquid phase of the pulp a mutual inhibition of the flotability occurs. It was found that a reduction of the content of precipitate in the mixture leads to a considerable reduction of the flotation which is due to the inhibiting effect of gypsum on the flotation of the precipitate. The use of aeroflot-25 in the mixture with kerosene as collector for the basic flotation in the presence of copper salts and the processing of the residues with reagent IM-11 in the presence of trikresyl phosphate makes it possible to obtain a concentrate containing 29-30% P_2O_5 from the original mixture with a content of approximately 17% P_2O_5. In this case 79-80% of P_2O_5 are again obtained. Furthermore it was found that the use of trikresyl phosphate as peptizer in the processing of the residues

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The Flotability of Gypsum and of a Precipitate With Different Reagents SOV/153-2-3-20/29

of basic flotation makes it possible to obtain a concentrate strongly enriched with P_2O_5. 2 tables show the results of flotation of precipitate gypsum mixtures with contents of 21.5% P_2O_5 (Table 1), and 17.2% P_2O_5 (Table 2), respectively, by Aeroflot-25 in the presence of copper sulphate. Table 3 shows the results of flotation of a precipitate gypsum mixture with 17.2% P_2O_5 by the addition of aeroflot-25 in 4 portions in the presence of kerosene and copper sulphate. Table 4 gives a survey on the processing of the residues obtained in basic flotation with the reagent IM-11 in the presence of trikresyl phosphate. Figure 8 shows a principal scheme of the separation of a precipitate-gypsum mixture by flotation with aeroflot-25 in the presence of kerosene and by the reagent IM-11 in the presence of trikresyl phosphate. There are 8 figures, 4 tables, and 4 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta Kafedra tekhnologii neorganicheskikh veshchestv (Leningrad Technological Institute imeni Lensovet, Chair of Inorganic

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The Flotability of Gypsum and of a Precipitate With Different Reagents SOV/153-2-3-20/29

Substances)

SUBMITTED: March 12, 1958

Card 4/4

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.; TERESHCHENKO, L.Ya.

Absoprtion of nitrogen oxides by soda solutions under conditions of foaming. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.5: 803-809 '59. (MIRA 13:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxides)

5(2)

SOV/80-32-3-8/43

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Zhil'tsova, D.F.

TITLE: The Rate of the Decomposition of Apatite by Phosphoric Acid (O skorosti razlozheniya apatita fosfornoy kislotoy)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 509-515 (USSR)

ABSTRACT: The decomposition of apatite by phosphoric acid for the production of fertilizer in a cyclic process is studied here. The unreacted apatite was returned to the process. The apatite used had a content of 39.45% P_2O_5. The phosphoric acid was chemically pure. If the acid had a P_2O_5 content of 13.6%, the coefficient of decomposition reached 20.5% in the first hour, but only 2 and 1.5% respectively in the following 2 hours. A similar difference between the initial and final rate of decomposition may be observed at other concentrations. The decomposition by dilute acid was relatively slow. The optimum was obtained with acid containing 54% P_2O_5, a temperature of 40 - 60°C and a norm of 95 - 100% of the stoichiometric one. The coefficient of decomposition after 2 hours was 70% in this case. There are 5 graphs, 1 table and 7 references, 5 of which are

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The Rate of the Decomposition of Apatite by Phosphoric Acid SOV/80-32-3-8/43

Soviet and 2 English.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 10, 1958

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5(2)

SOV/80-32-4-2/47

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Zhil'tsova, D.F.

TITLE: On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions (O skorosti gidroliza monokal'tsiyfosfata v vodnykh rastvorakh)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 710-716 (USSR)

ABSTRACT: The decomposition of monocalciumphosphate by water is determined by the time of contact. At a salt:water ratio of 1.5 and 20°C the decomposition in the first 10 min is 32.5%, in the following 10 min-7.5%. For a ratio of 0.1 the figures are 10 and 1.7%, respectively. A higher temperature increases decomposition. At a ratio of 1.5 the decomposition within 2 hours reaches at 30°C 38.5%, at 50°C 55.4% and at 80°C 72.5%. At a ratio of 0.05 the corresponding figures are: 22.5%, 29.5% and 47.2%. In the presence of free phosphoric acid the degree of decomposition is considerably lower. At a temperature of 20°C and ratios of 0.75 and 0.5, decomposition could not be observed in the first 5 hours when free phosphoric acid was present. At 40°C hydrolysis started only after 3 hours. The hydrolysis rate decreases after an initial period which is explained by the saturation of the water with dicalciumphosphate.

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SOV/80-32-4-2/47

On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions

There are 7 graphs, 1 table and 8 references, 3 of which are Soviet, 2 American, 1 English, 1 French and 1 German.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 10, 1958

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5(2)

SOV/80-32-5-13/52

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Tarat, E.Ya.

TITLE: The Effect of the Height of a Foam Layer on a Sieve Plate on the Absorption of Carbon Dioxide by an Alkali Solution

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1004-1010 (USSR)

ABSTRACT: The hydrodynamic conditions of the treatment of a gas-liquid system on a sieve plate are determined by the linear speed of the gas and the liquid, by the quantity of the liquid on the plate and by the physical properties of the components of the system. Experiments on the absorption of CO_2 by solutions of caustic soda under foaming conditions were carried out in a glass column of 36 mm in diameter which was divided horizontally by a vinylplastic grid. The carbon dioxide was absorbed from air containing 6% CO_2 at 60°C by a 3 n NaOH solution. It has been shown that the concentration of CO_2 varying from 0-15% has no effect on foam formation. Figure 3 shows that the foam layer height is dependent on the gas speed. At constant gas speed the hydraulic resistance of the foam layer increases proportionally with its height, changing with the height of the initial

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The Effect of the Height of a Foam Layer on a Sieve Plate on the Absorption of Carbon Dioxide by an Alkali Solution SOV/80-32-5-13/52

layer of the liquid. The higher the gas speed in the apparatus, the lower is the specific gravity of the foam and the lower is also its hydraulic resistance. The coefficient of CO_2 absorption is proportional to the height of the foam. The rate of the absorption process is proportional to the energy consumed in the formation of the system. There are: 7 graphs, 1 diagram and 9 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: October 3, 1957

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5.4300

75657
SOV/80-32-10-6/51

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Zhil'tsova, D. F.

TITLE: Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2164-2171 (USSR)

ABSTRACT: This is a study of the effect of acid concentration (Fig. 1), time (Fig. 2), temperature (Figs. 3 and 4), and H ion concentration (Fig. 5) on the apatite decomposition rate; industrial acid/phosphate ratios were used. The decomposition was found to occur in two stages. At the first and short stage, the rate is characteristic of chemical reactions in that it depends both on phosphoric acid concentration, acid/phosphate ratio, and on temperature within the 40-80° range. The decomposition rate peak shown in Fig. 1 is explained by an increase in the H ion concentration despite a decrease in dissociation up to this peak beyond which a sharp drop in dissociation lowers the decomposition

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid 75657

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rate. The H ion concentrations plotted in Fig. 5 were calculated from the formula:

$$C'_{H^+} = K_s \cdot \frac{C_H}{C_c \cdot \alpha}$$

in which C_c, the $Ca(H_2PO_4)$ concentration, was determined graphically using the CaO-P_2O_5-H_2O phase diagram. α was assumed equal to 1, so that Fig. 5 shows only the character of the rate-H ion concentration relation rather than the absolute value. Actually, since α decreases with increasing acid concentration, curve III should lie to the right of II, followed by V, VI, IV, and I. Only at the first stage is the decomposition rate, in agreement with Chepelevetskiy (Tr. NIUIF, 137 (1937)), proportional to H ion concentration. No single relation can describe the entire process. At the second stage, decomposition involves H ion diffusion through a $Ca(H_2PO_4)$ solid film. Examination of the shape of the 1/y

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Concerning the Mechanism of Apatite Decomposition 75657
by Phosphoric Acid
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vs 1/τ curve (Fig. 6) indicates that the film is not the only factor retarding decomposition in the first 15 to 20 min; after that time, however, the film becomes the main retarding factor. The existence of two stages explains the small effect the acid/phosphate ratio and temperature within the 40-80° range have on the decomposition rate. Although an increase in the ratio prolongs the first stage by increasing the $Ca(H_2PO_4)$ solubility somewhat, a very large excess of acid is required to increase the decomposition rate markedly. At the second stage, since temperature rises within the 40-80° range have little effect on H ion diffusion rates and on $Ca(H_2PO_4)$ solubility, the decomposition rate is changed only slightly. There are 6 figures; and 8 Soviet references.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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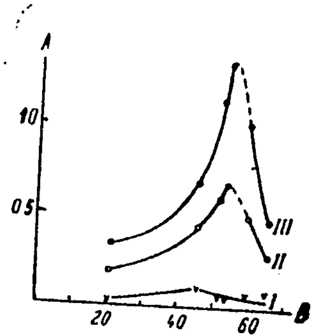

Fig. 1.

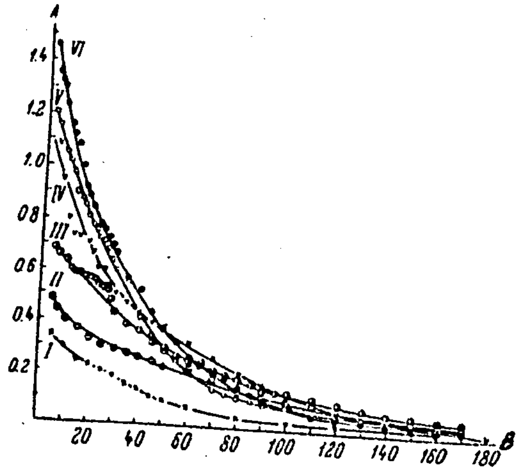

Fig. 2.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid 75657

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Fig. 1. Isotherm-isochrons of the dependence of apatite decomposition rate on phosphoric acid concentration at 20° and with stoichiometric acid/phosphate ratio. (A) Decomposition rate (g/min); (B) acid concentration (% P_2O_5). Time (min): (I) 120, (II) 30, (III) 5.

Fig. 2. Change in the apatite decomposition rate with time. (A) Decomposition rate (g/min); (B) time (min). Acid concentration (% P_2O_5): (I) 21.0, (II) 64.77, (III) 45.6, (IV) 59.0, (V) 51.5, (VI) 53.6.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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SOV/80-32-10-6/51

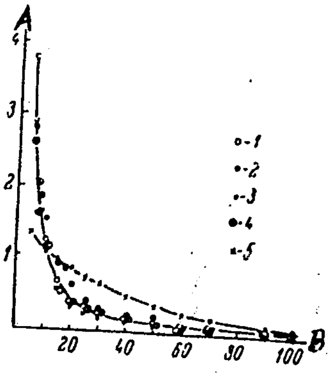

Fig. 3.

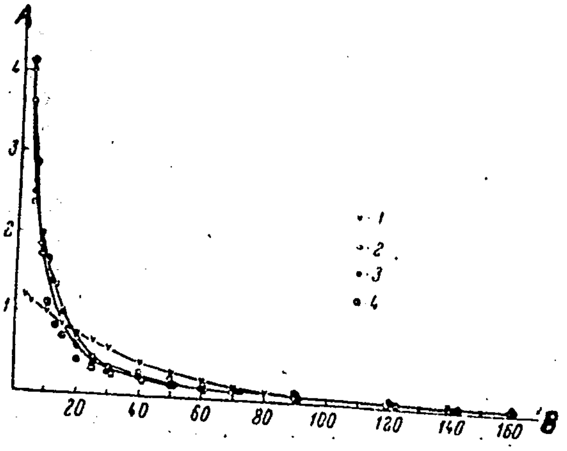

Fig. 4.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid 75657

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Fig. 3. Rate of apatite decomposition by acid containing 53.6% P_2O_5 vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature: (1) 40, (2) 50, (3) 60, (4) 70, (5) 20.

Fig. 4. Rate of apatite decomposition by acid containing 51.5% P_2O_5 vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature (°C): (1) 20, (2) 40, (3) 50, (4) 60.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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SOV/80-32-10-6/51

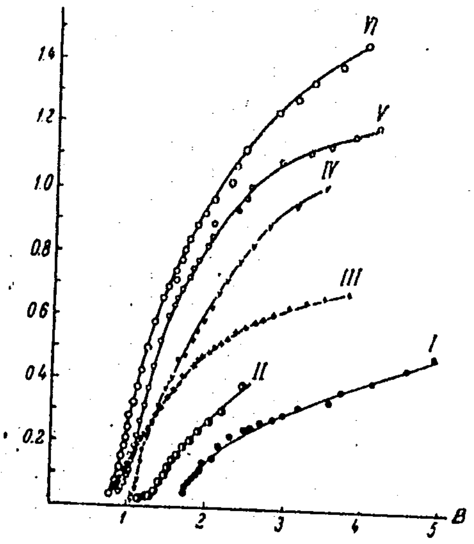

Fig. 5.

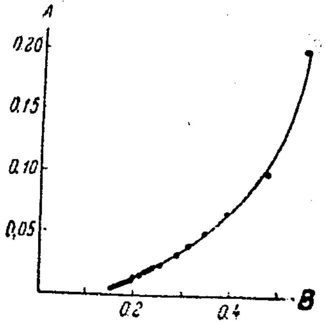

Fig. 6.

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POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-sheng]

Metastable equilibria in the system CaO - P_2O_5 - H_2O. Zhur. prikl.khim. 33 no.7:1482-1491 Jl '60. (MIRA 13:7)

1. Leningradskiy tekhnologicheskiy institut im.Lensoveta.
(Calcium oxide) (Phosphorus oxide)

POZIN, M.Ye.; KOPYLEV, B.A.; ZHIL'TSOVA, D.F.

"Superphosphate; physicochemical principles of its production" by M.L.Chepelevtskii, E.B.Brutskus. Reviewed by M.E.Pozin, B.A. Kopylev, D.F.Zhil'tsova. Zhur.prikl.khim. 33 no.7:1680-1681 Jl '60. (MIRA 13:7)

(Phosphates) (Chepelevtskii, M.L.)
(Brutskus, E.B.)

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.

Rate of decomposition of Kara-Tau phosphorites by sulfuric acid. Zhur. prikl. khim. 33 no.9:1969-1976 S '60. (MIRA 13:10)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Phosphorites)

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-shêng]

Metastable equilibria in the system $Ca(NO_3)_2 - H_2O$. Zhur. prikl. khim. 33 no.12:2675-2684 D '60. (MIRA 14:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Calcium nitrate)

POZIN, Maks Yefimovich. Prinimali uchastiye: ARSEN'YEVA, L Z.; KAGANOVICH, Yu.Ya.; KLEBANOV, G.S.; KLEVKE, V.A.; KOPYLEV, B.A.; SOKOLOVSKIY, A.A.; MAKOVETSKIY, L.A., red.; GRIVA, Z.I., red.; ERLIKH, Ye.Ya., tekhn. red.

[Technology of mineral salts; fertilizers, pesticides, industrial salts, oxides and acids] Tekhnologiia mineral'nykh solei; udobrenii, pestitsidov, promyshlennykh solei, okislov i kislot. 2., izd. perer. i dop. pri uchastii: L.Z.Arsen'evoi i dr. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 1008 p. (MIRA 14:10)
(Fertilizers and manures) (Salts)

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.

Absorption of nitrogen oxides by lime milk under bubbling and frothing conditions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1:102-107 '61.
(MIRA 14:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxide) (Gases--Purification)

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.; VIL'NITS, Ye.L.

Rate of decomposition of Kara-Tau phosphorites treated by the chamberless process (in nonthickening pulps). Zhur. prikl. khim. 34 no.2:259-265 F '61. (MIRA 14:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphorites)

POZIN, M.Ye.; KOPYLEV, B.A.; VARSHAVSKIY, V.L.; PINTER, I.

Crystallization of calcium sulfate in the reaction of monocalcium phosphate with sulfuric acid in a phosphoric acid medium. Zhur. prikl.khim. 34 no.11:2384-2390 N '61. (MIRA 15:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Calcium sulfate)

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.

Production of superphosphates from Kara-Tau phosphorites without the use of storage rooms (from nonthickening pulp). Zhur.prikl.khim. 34 no.8:1653-1661 Ag '61. (MIRA 14:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Phosphates)

POZIN, M.Ye.; KOPYLEV, B.A.; TARAT, E.Ya.; KARBANOV, S.G.

Absorption of sulfur dioxide in a foaming state. Izv.vys.ucheb. zav.;khim. i khim.tekh. 3 no.3:489-493 '60. (MIRA 14:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Sulfur dioxide) (Absorption)

35689
S/080/62/035/003/001/024
D258/D30

11.1160

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya. and Bel'chenko, G. V.

TITLE: The absorption of nitrogen dioxide by nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473-482

TEXT: The authors studied the influence of NO_2 pressure, temperature, and acid concentration on the rate of NO_2 absorption by HNO_3 in a foaming column, operating under atmospheric pressure. Specifically, a stream of inert gas carrying N-oxides was bubbled through a solution of HNO_2 containing nitric acid in a laboratory-scale foaming apparatus. Foaming was produced by a grid, through which the liquid-gas mixture was carried. It was shown that NO_2 absorption increased sharply with the increase in NO_2 partial pressure, P_{NO_2}, up to $P_{NO_2} = 0.03$ atm; the absorption rate, V, was

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expressed as follows:

$$K\left(\frac{P_i - P_f}{\ln\frac{P_i - P_p}{P_f - P_p}} - 0.0045\ a\right)$$

where P_i, P_f were the initial and final, partial pressures of NO_2 on entering and leaving the apparatus, and P_p - the equilibrium partial pressure of N-oxides over HNO_3 under the prevailing conditions. The relationship between the absorption coefficient K and the gas velocity W was found to be expressed by $k = C.W^{0.67}$; this relation was valid at P_{NO_2} below 0.01 atm., but K was independent

S/080/62/035/004/001/022
D267/D301

11.1160

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya. and Bel'chenko, G. V.

TITLE: Role of the degree of oxidation of nitrogen oxides during their conversion into nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 4, 1962, 717-722

TEXT: During the manufacture of dilute HNO_3 in packed towers the degree of oxidation of the nitrogen-oxide-containing gas (the ratio of NO_2 to the sum of all oxides) in practice does not exceed 70 - 80%. Since the equilibrium pressure of nitrogen oxides is highly dependent on the degree of oxidation, the latter has a considerable effect on the driving force of the process. The authors demonstrated in an earlier paper (Ref. 5: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473) that the absorption of N oxides with a degree of oxidation = 1 can have a high effectiveness when using a froth cycle under atmospheric pressure. Using the apparatus

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Role of the degree ...

S/080/62/035/004/001/022
D267/D301

described in the paper referred to above, the authors studied the effect of the degree of oxidation on the process of absorption of the oxide-containing gas at various conditions. The reduction of this degree results in a considerable decrease of the degree of conversion of oxides to HNO_3. The process of absorption of nitrogen oxides with various degrees of oxidation by HNO_3 of various concentrations is described by $V = K\overline{\Delta}$ at $\Delta P > 0.01$ atm. (where V is defined in the previous paper, and $\overline{\Delta}$ is the mean driving force of the conversion process). Although the variations of the degree of oxidation considerably affect the degree of conversion, yet the effect on the efficiency of the apparatus is rather small. The rise of temperature within 10 - 50°C reduces the absorption. By using the froth cycle one obtains a considerable intensification not only of the absorption process, but also of the process of oxidation of NO. There are 6 figures and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P. G. Goudle and K. G. Denbigh, Trans. Far. Soc., 49, 1, 361, 1953, 39-52.

Card 2/3

POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Importance of the degree of oxidation of nitrogen oxides during their processing to nitric acid. Zhur.prikl.khim. 35 no.4:717-722 Ap '62. (MIRA 15:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Nitrogen oxides) (Nitric acid)

POZIN, M.Ye.; KOPYLEV, B.A.; NIKITINA, L.F.; DMITREVSKIY, B.A.

Possibility of reducing the consumption of dilute nitric acid in the decomposition of phosphates. Zhur.prikl.khim. 35 no.6: 1184-1191 Je '62. (MIRA 15:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphates) (Nitric acid)

POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Absorption of nitrogen dioxide by nitric acid. Zhur.prikl.khim. 35 no.3:473-482 Mr '62. (MIRA 15:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Nitrogen oxides) (Nitric acid)

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.

Mechanism of decomposition of Kara Tau phosphorite by sulfuric acid. Zhur.prikl.khim. 35 no.5:929-939 My '62. (MIRA 15:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphorites) (Sulfuric acid)

POZIN, M.Ye.; KOPYLEV, B.A.; ZINYUK, R.Yu.

Production of feed precipitate from superphosphate. Zhur.
prikl.khim. 35 no.7:1415-1423 Jl '62. (MIRA 15:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphates) (Feeding and feeds)

POZIN, Maks Yefimovich; KOPYLEV, Boris Aronovich; ZHIL'TSOVA, D.F., red.; LEVIN, S.S., tekhn. red.

[New methods of preparing mineral fertilizers]Novye metody polucheniia mineral'nykh udobrenii. Leningrad, Goskhimizdat, 1962. 233 p. (MIRA 16:2)
(Fertilizers and manures) (Phosphates)

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-shêng]

Metastable equilibria in the systems $Ca(NO_3)_2 - HNO_3 - H_2O$ and $CaO - P_2O_5 - H_2O_5 - H_2O$ at 50°C. Zhur.prikl.khim. 35 no.10:2134-2146 O '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Systems (Chemistry)) (Phase rule and equilibrium)
(Phosphates)

POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Oxidation of nitric oxide in the course of nitric acid production.
Zhur.prikl.khim. 35 no.11:2353-2359 N '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Nitric acid) (Nitrogen oxide) (Oxidation)

S/080/63/036/001/002/026
D204/D307

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Tereshchenko, L.Ya. and Bel'chenko, G.V.

TITLE: A method of calculating the composition of nitrogen oxides over solutions of nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963, 16 - 24

TEXT: A method is described for calculating the equilibrium conditions in the system aq.HNO - N oxides, which is useful in considering the equilibrium

$$3\ NO_2 + H_2O \rightleftharpoons 2\ HNO_3 + NO. \qquad (1)$$

The method is based on the construction of equilibrium curves of $P_{NO+NO_2} - P_{NO_2}$ (where $P_{NO_2} = p_{NO_2} + 2\ p_{N_2O_4}$, p's being partial pressures). These equilibrium lines are plotted with the aid of equation

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POZIN, M.Ye.; KOPYLEV, B.A.; ZINYUK, R.Yu.

Formation of fluorine complexes of aluminum during acid treatment of phosphates. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.1: 98-105 '63. (MIRA 16:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Aluminum compounds) (Phosphates) (Fluorine compounds)

POZIN, M. Ye.; KOPYLEV, B. A.; VAN LI-SHEN; SHISHKIN, G. I.

Rate of decomposition of apatite by nitric acid solutions of the system CaO - P_2O_5 - N_2O_5 - H_2O. Zhur.prikl.khim. 36 no.2:242-251 F '63.
(MIRA 16:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Apatite) (Nitric acid) (Phosphates)

POZIN, M.Ye.; KOPYLEV, B.A.; KYRSHEV, I.P.

Rate of apatite decomposition in unsaturated solutions of the system CaO - P_2O_5 - H_2O. Zhur.prikl.khim. 36 no.6:1175-1180 Je '63. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta i Sofiyskiy khimiko-tekhnologicheskiy institut.
(Apatite) (Phosphoric acid)

POZIN, M.Ye.; KOPYLEV, B.A.; ZINYUK, R.Yu.

Liberation into the gas phase of fluorine compounds formed in the acid processing of apatite concentrates. Zhur.prikl.khim. 37 no.1:9-16 Ja '64. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN[Wang Li-sheng];
KAGANOVICH, S.I.

Crystallization of $Ca(NO_3)_2 \cdot 4H_2O$ from metastable solutions of the system $Ca(NO_3)_2 - H_3PO_4 - HNO_3 - H_2O$. Zhur. prikl. khim. 34 no.5:994-1001 My '61. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Crystallization) (Calcium nitrate)

ABRAMOVA, N.A., nauchn. sotr.; BEL'CHENKO, G.V., kand. tekhn. nauk; BERENBLIT, V.V., nauchn.sotr.; VASIL'YEV, V.P., kand.khim. nauk; DOBYCHIN, D.P., doktor khim. nauk; IOFFE, B.V., dokt. khim.nauk; KAMINSKIY, Yu.L., nauchn.sotr.; KARPOVA, I.F., kand. khim. nauk; KOPYLEV, B.A., doktor khim. nauk; LUTUGINA, N.V., kand. khim. nauk; MATEROVA, Ye.A., kand. khim. nauk; MORACHEVSKIY, Al.G., kand. khim. nauk; MORACHEVSKIY, An.G., kand. khim. nauk; NIKEROV, A.E., kand. khim. nauk; PAL'M, V.A., kand. khim. nauk; RABINOVICH, V.A., kand. khim. nauk; SOKOLOV, P.N., kand. khim. nauk; FRIDRIKHSBERG, D.A., kand. khim. nauk; TSYGIR, Ye.N., nauchn. sotr.; SHAGITSULTANOVA, G.A., kand. khim. nauk; SHKODIN, A.M., doktor khim. nauk; YATSIMIRSKIY, K.B.; GRIGOROV, O.N., doktor khim. nauk, red.; ZASLAVSKIY, A.I., kand. khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; POZIN, M.Ye., doktor tekhn. nauk, red.; PORAY-KOSHITS, B.A., doktor khim. nauk, red.; PROTASOV, A.M., kand. fiz.-mat. nauk, red.; ROMANKOV, P.G., red.

[Handbook for the chemist] Spravochnik khimika, 2. izd., perer. i dop. Moskva, Khimiia. Vol.3. 1964. 1004 p. (MIRA 18:1)

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POZIN, M. Ye.; KOPYLEV, B.A.; YADATSKAYA, Ya.K.

Supersaturation of the system calcium oxide-sulfate-water with calcium sulfate. Izv. vys.ucheb. zav., khim. i khim. tekh. 7 no.5:699-704 '64 (MIRA 18:1)

1. Kafedra tekhnologii neorganicheskikh veshchestv Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.

POZIN, M.Ye.; KOPYLEV, B.A.; YADATSKAYA, Ya.K.

Rate of crystallization of calcium sulfate from its supersaturated sulfuric acid solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:881-885 '64. (MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

POZIN, M.Ye.; KOPYLEV, B.A.; AZBEL', I.Ya.; NIKITINA, L.F.; DMITREVSKIY, B.A.

Improvement of the complex fertilizer production of the Novomoskovsk Chemical Combine. Zhur. prikl. khim. 37 no.10:2089-2093 O '64.
(MIRA 17:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Novomoskovskiy khimicheskiy kombinat.

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AUTHORS: Pozin, M. Ye.; Kopylev, B. A.; Yefremov, I. F.; Varshavskiy, V. L.; Markovich, A. S. 20 B

TITLE: Coagulation processes in the manufacture of superphosphates

SOURCE: Kolloidnyy zhurnal, v. 27, no. 4, 1965, 593-597 27

TOPIC TAGS: superphosphate, phosphorus compound, fertilizer, potassium compound, calcium sulfate

ABSTRACT: The mechanism of potassium sulfate deposition on apatite granules in the manufacture of superphosphates was investigated to determine the effect of the particle size on this process. The electrokinetic potentials of apatite and other minerals in the superphosphate pulp were established. Test specimens consisted of a standard apatite concentrate with 39.5% of P_2O_5 and a reactive sulfuric acid (100 g apatite and 70 g H_2PO_4 monohydrate). The experimental process is briefly described. The ability of calcium sulfate crystals to become attached to apatite grains is determined mainly by their size. Crystals smaller than 10-15 μ show a very strong adhesion; crystals larger than 30-40 μ do not adhere

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and form no slime coatings which retard the decomposition reaction. The deposition is a result of the adagulation process under the effect of the Van der Waals forces at lowering of the energy barriers. The electrokinetic potentials of apatite and other minerals were measured by the electro-osmotic method at 20C. In phosphoric acid, the electrokinetic potential of apatite has a high absolute value; in sulfuric acid its potentials are low. The potential of anhydrite and gypsum is near zero at all the phosphoric and sulfuric acid concentrations. In distilled water and in dilute solutions of phosphoric and sulfuric acids, apatite and aegirite have a slight negative potential which becomes positive over the acid concentration range of $10^{-2} - 10^{-1}$ N. It was established that the formation of slime coating may be avoided by choosing conditions ensuring the formation of calcium sulfate crystals larger than 20-30 μ or by controlling the charges of the interacting particles. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Engineering Institute)

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